AUSTIN A40

Series GS4 : GV4 : GP4 : GQU4 : GD3 : GD5.

Workshop Manual

A BMC Service Publication

AUSTIN

A40 MODELS

SERIES GS4 GD3 GD5 GV4 GP4 GQU4

Service Manual

DECEMBER 1957

THE AUSTIN MOTOR COMPANY LIMITED BIRMINGHAM, ENGLAND

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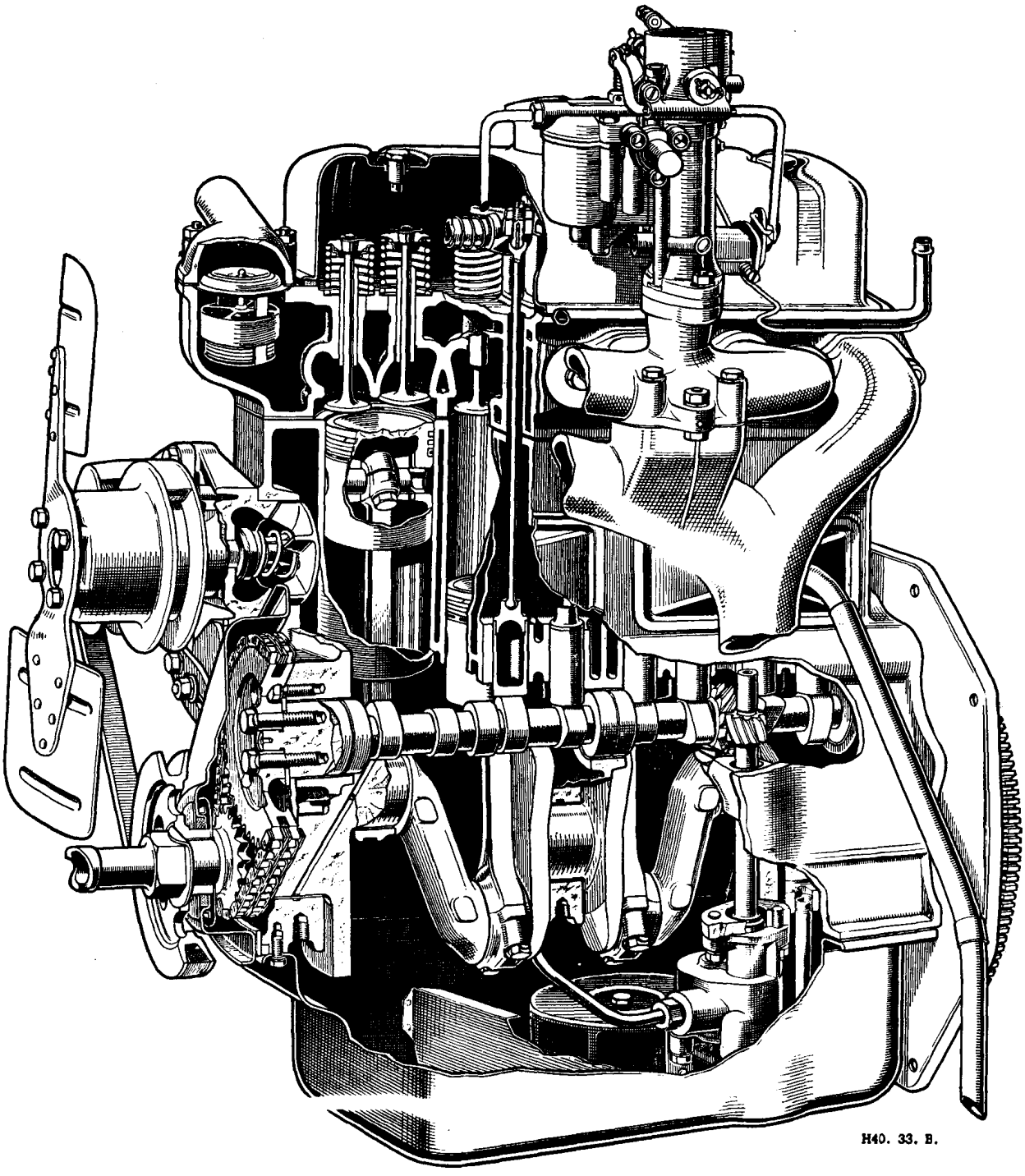
Introduction

This manual has been compiled to assist Austin Distributors and Dealer Organisations in the efficient servicing and maintenance of the A40 Models.

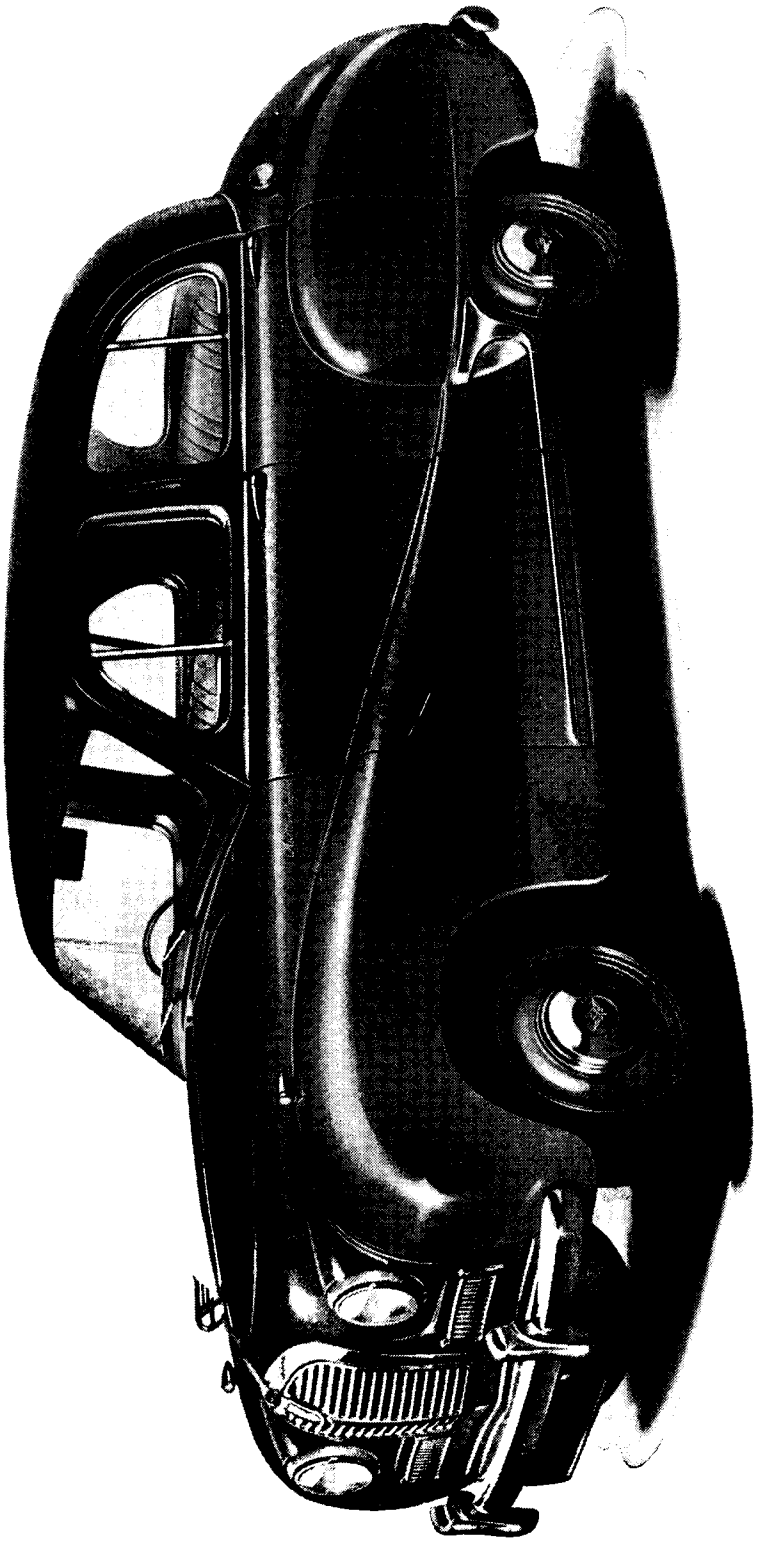
Each assembly of the major components is described in detail. In addition, comprehensive instructions are given for complete dismantling, assembling, adjusting and inspection of these assemblies. It is emphasized that only genuine Austin parts should be used as replacements for components found unfit for further service.

The information given, within these pages, is authentic and covers the models produced prior to the publication date on page 1. Modifications to later vehicles, which may become necessary, will be described in subsequent editions of the manual. When ordering spares it is imperative that operators use the 'Spare Parts List' of the appropriate model and **not** refer to the manual.

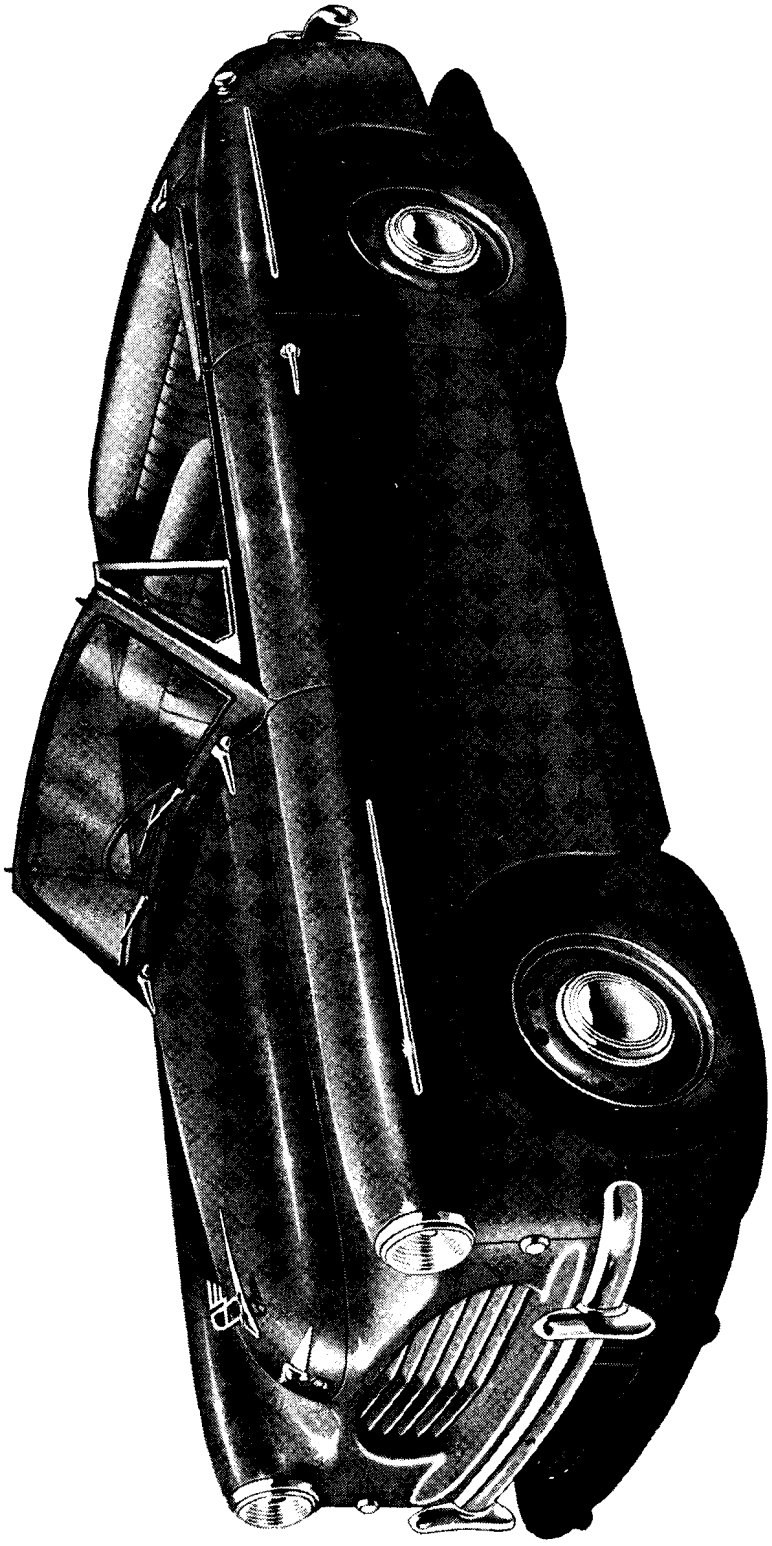
THE "A40" O.H.V. ENGINE



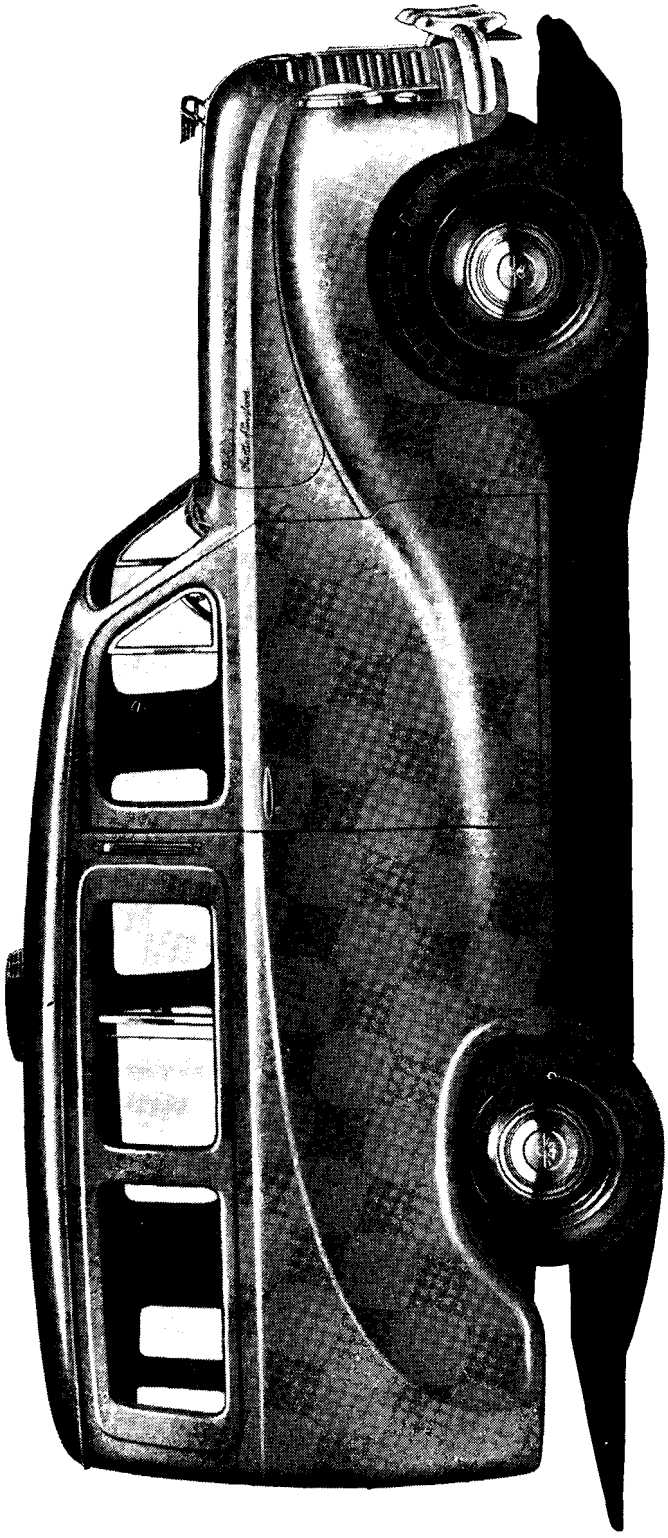
A sectional view of the engine showing the detail of the main components. Although the A40 "Sports" manifolds and carburetters differ to those of the above illustration the main construction and servicing operations are identical unless otherwise stated.



THE "A40" SOMERSET SALOON



THE "A40" SPORTS



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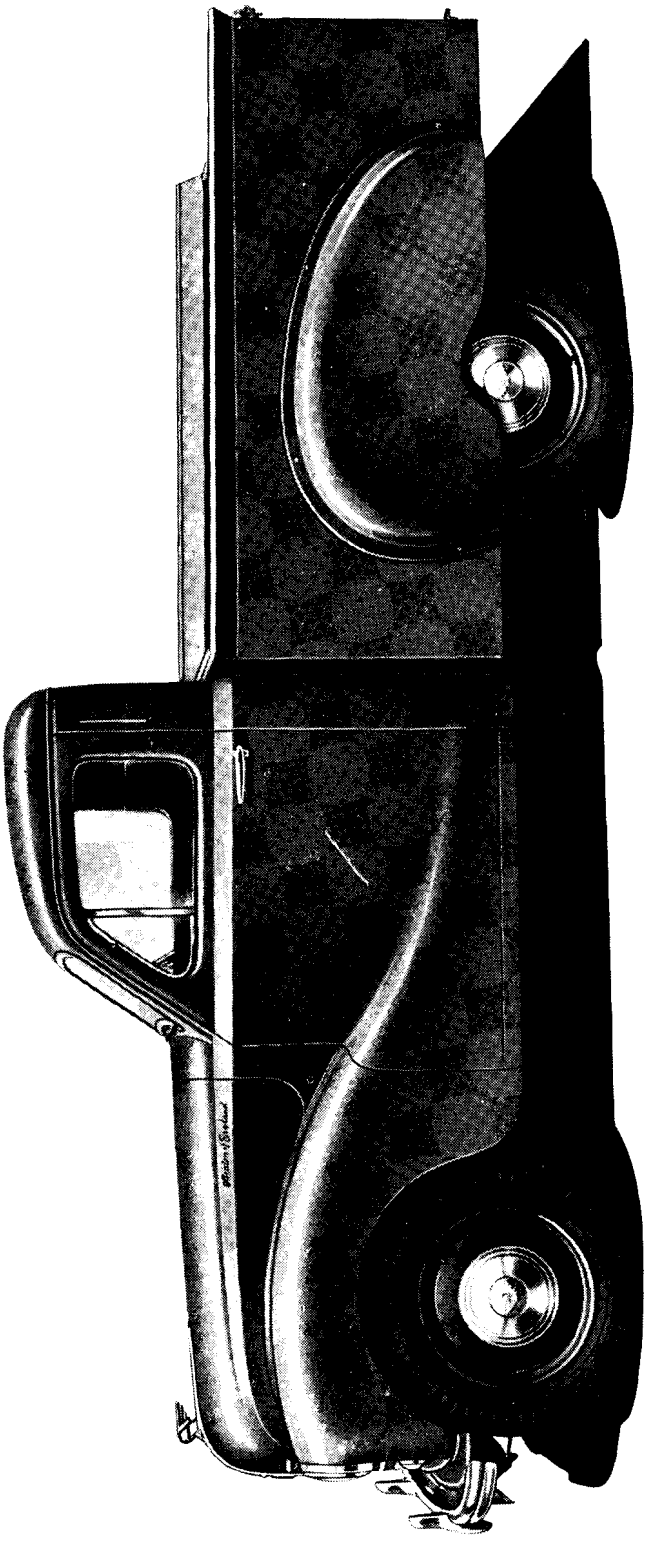

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GENERAL SPECIFICATIONS

THIS manual contains information for vehicles of chassis number 657001 and engine number 700001 onwards, Some models prior to this were fitted with series G.S.3. engine (see manual publication No. 441D). When ordering parts note engine and chassis numbers quoted on spare parts list.

The engine number is located on the right-hand side of the cylinder block and the chassis number on the chassis. adjacent to the engine front mounting bracket, on the opposite side of the steering column. For quick reference these numbers are stamped on a plate attached to the sun visor on all models except the Sports, where it is fixed to the inside of the glovebox lid. Except where specifically stated, all information given for the Saloon should be regarded as also appertaining to the Coupé and Commercial models.

ENGINE

Dimensions (Saloon)

No. of cylinders 4; Bore 2.578-ins. (65.48mm.); stroke 3.5-ins. (89mm.); R.A.C. rating 10.6; capacity 73.17 cu. ins. (1,200 c.c.); B.H.P. 42 (42.58 C.V.) at 4,500 r.p.m.; Max. torque 58 lbs./ft. (8.02 kgm.) at 2,400 r.p.m.; compression ratio 7.2 to 1; oil pressure 45 to 50 lbs. per sq. in. (3.16 to 3.51 kg./cm.^{2}).

Dimensions (Sports)

No. of cylinders 4; Bore 2.578-ins. (65.48mm.); stroke 3.5-ins. (89mm.); R.A.C. rating 10.6; capacity 73.17 cu. ins. (1,200 c.c.); B.H.P. 46 (46.63 C.V.) at 5,000 r.p.m.; max. torque 59 lbs./ft. (8.15 kgm.) at 2,400 r.p.m.; compression ratio 7.2 to 1; oil pressure 45 to 50 lbs. per sq. in. (3.16 to 3.51 kg./cm.^{2}).

Valve Timing and Clearances

Inlet valve opens 5°B.T.D.C. and closes 45°A.B.D.C. Exhaust valve opens 40°B.B.D.C. and closes 10°A.T.D.C. Inlet and exhaust valve clearances.—.015-ins. (.38 cm.).

FUEL SYSTEM

Carburetter (Saloon)

Make—Zenith; Type—30 VIG-8; Choke tube—25; Main jet—90; Compensating jet—65; slow running jet—50; Needle and seating—1.5; Pump jet—50.

Carburetter (Sports)

Twin S.U. Carburetters inclined at an angle 20° Needle—model EK.

Fuel Pump

A.C. Sphinx fuel pump type "U", normal working pressure 1½ to 2½ lbs. per sq. in. (.105 to .189 kg./cm.^{2}).

CLUTCH

A flexible dry plate Borg and Beck clutch. Pedal free movement—¾-in. (1.9 cm.).

GEARBOX

Four forward speeds and reverse. Steering column mounted gear lever; synchromesh engagement for second third and top. Ratios; 1st. 3.89; 2nd. 2.44; 3rd. 1.54; 4th. direct; reverse 5.39.

REAR AXLE

Spiral bevel three-quarter floating. Crown wheel and pinion ratios: Saloon 37: 7; Sports 36: 7; Commercials 43: 7.

Overall Gear Ratios

	1st	2nd	3rd	4th	Rvse.
Saloon and Coupé	20.54	12.88	8.13	5.28	28.46
Sports	20.00	12.52	7.89	5.14	27.68
Commercials ...	23.89	14.95	9.43	6.14	33.09

STEERING

14 to 1 ratio cam gear steering. Toe-in 1/16-in. to 1/8-in.

SUSPENSION

Front

Independent coil springs. Castor angle 2¼°. Camber angle 1°. Swivel pin inclination 6½°.

Rear

Semi-elliptic underslung reverse camber springs.

BRAKES

Girling hydraulic front and rear. Front brakes of two leading shoe design. Pedal free movement—⅛-in. Handbrake operates mechanically on rear wheels only.

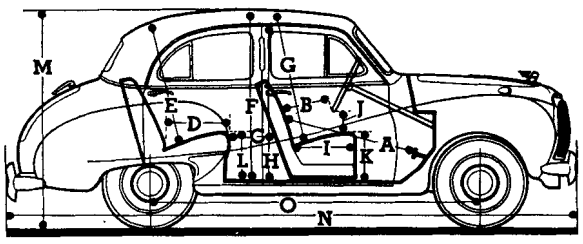
FRAME

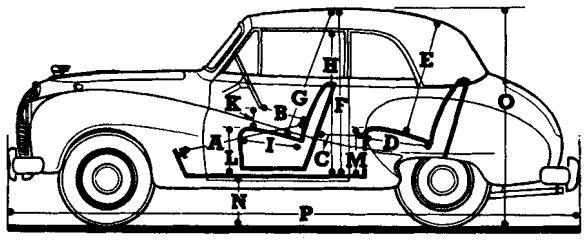
Welded pressed steel frame with full length box section side, front and rear members. The centre part is stiffened by cross bracing. Additionally, the cross bracing of the Sports chassis is completely boxed in to give the greater torsional and diagonal strength required for a sporting car.

CAPACITIES

Petrol tank—8¾ gallons—10.5 U.S. gallons—37 litres; Oil sump—7 pints—8.4 U.S. pints—4 litres inclusive of filter; cooling system (Saloon)- -12 pints—14.4 U.S. pints—6.82 litres, (Sports)—14 pints—16.8 U.S. pints—7.9 litres; Gearbox—3 pints—3.6 U.S. pints—1.68 litres; Rear axle—2¼ pints—2.7 U.S. pints—1.26 litres; Battery capacity—38 ampere hours at 10 hour discharge rate.

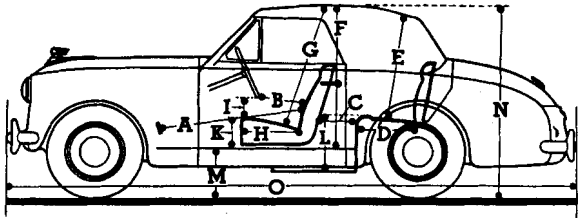
LEADING DIMENSIONS





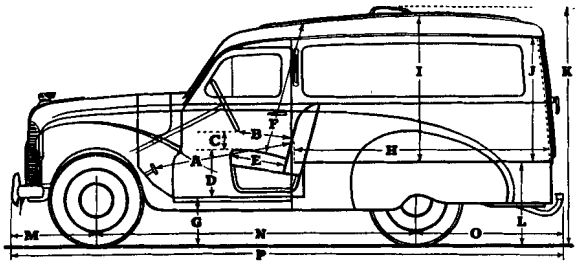
A40 SALOON DIMENSIONS		English	Metric
		ft. ins.	metres
Pedal to Seat Squab	A	3 5	1.04
		2 10	0.86
		1 5	0.43
Steering Wheel to Seat Squab	B	10	0.25
		1 2	0.36
Distance between Seats	C	7	0.18
Rear Seat Cushion Depth	D	1 7½	0.50
Height over Rear Seat	E	2 10½	0.88
Maximum Interior Height	F	3 11	1.19
Height over Front Seat	G	3 0½	0.92
Minimum Height of Door Opening ...	H	3 7	1.09
Front Seat Cushion Depth	I	1 6½	0.47
Steering Wheel to Seat Cushion ...	J	5½	0.14
Front Seat Cushion above Floor ...	K	1 1½	0.35
Rear Seat Cushion above Floor ...	L	1 2½	0.37
Overall Height	M	5 4	1.63
Overall Length	N	13 3½	4.05
Wheelbase	O	7 8½	2.35
Overall Width	...	5 3	1.60
Body Width between Centre Pillars (at Waist)	...	4 0	1.22
Front Seat Cushion Width (max.) ...	...	1 10	0.56
Rear Seat Cushion Width	...	3 3½	1.00
Maximum Width over Rear Seat ...	...	3 11	1.19
Track, front (at ground)	...	4 0 1/16	1.22
Track, rear	...	4 2	1.27
Ground Clearance	...	7½	0.19
Turning Circle	...	37 0	11.28
Luggage Compartment—Height of Opening	...	1 8	0.51
Luggage Compartment—Width of Opening	...	2 7½	0.80
Luggage Compartment—Maximum Depth	...	3 0½	0.93
Luggage Compartment—Approx. Capacity	...	10 cu. ft.	0.28 cu. m.
Luggage Carrier Load	...	1 cwt.	51 kg.
Approx. Weight—less spare wheel, tools and fuel, plus oil and water	...	19 cwt. 14 lbs.	971 kg.

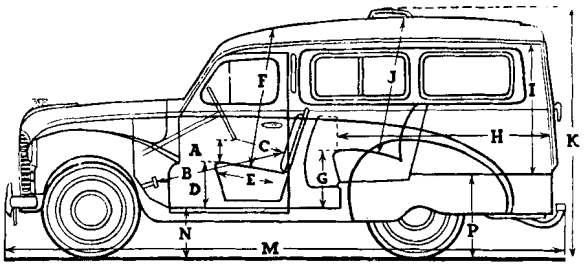
A40 COUPÉ DIMENSIONS		English	Metric
		ft. ins.	metres
Pedal to Seat Squab	A	3 5	1.04
		2 10	0.86
Steering Wheel to Seat Squab	B	1 5	0.43
		10	0.25
Maximum Distance between Seats ...	C	11	0.28
Rear Seat Cushion Depth	D	1 7½	0.50
Height over Rear Seat	E	2 10	0.86
Maximum Interior Height	F	3 11	1.19
Height over Front Seat	G	3 0½	0.92
Height of Door Opening	H	3 4	1.02
Front Seat Cushion Depth	I	1 6½	0.47
Front Seat Cushion Width	...	1 9½	0.54
Steering Wheel to Cushion	K	5½	0.14
Front Cushion above Floor	L	1 1½	0.35
Rear Cushion above Floor	M	1 1½	0.34
Minimum Height—Floor to Ground ...	N	1 3½	0.39
Overall Height	O	5 2½	1.59
Overall Length	P	13 3½	4.05
Overall Width	...	5 3	1.60
Scuttle Width (at knee height)	...	3 9	1.14
Rear Seat Maximum Width	...	3 3½	1.00
Wheelbase	...	7 8½	2.35
Track, front (at ground)	...	4 0 1/16	1.22
Track, rear	...	4 2	1.27
Ground Clearance	...	7½	0.19
Turning Circle	...	37 0	11.28
Luggage Compartment—Height of Opening	...	1 8	0.51
Luggage Compartment—Width of Opening	...	2 7½	0.80
Luggage Compartment—Depth of Platform	...	3 0½	0.93
Luggage Compartment—Capacity ...	...	10 cu. ft.	0.28 cu. m.
Luggage Carrier Load	...	1 cwt.	51 kg.
Approximate Weight—less spare wheel, tools and fuel—plus oil and water	...	19½ cwt.	991 kg.



A40 SPORTS DIMENSIONS		English	Metric
		ft. ins.	metres
Pedal to Seat Squab	A	3 6½	1.08
		3 2	0.97
		1 2½	0.37
Steering Wheel to Seat Squab ...	B	10	0.25
Distance between Seats	C	1 1	0.33
		8½	0.22
Rear Seat Cushion Depth	D	1 5	0.43
Height over Rear Seat	E	2 8½	0.83
Maximum Interior Height	F	3 6	1.07
Height over Front Seat	G	3 1	0.94
Front Seat Cushion Depth	H	1 6	0.46
Front Seat Cushion Width	...	1 9	0.53
Steering Wheel to Cushion	I	4½	0.11
Front Cushion above Floor	K	10½	0.27
Rear Cushion above Floor	L	1 4½	0.43
Minimum Height—Floor to Ground	M	1 3½	0.39
Overall Height	N	4 9½	1.46

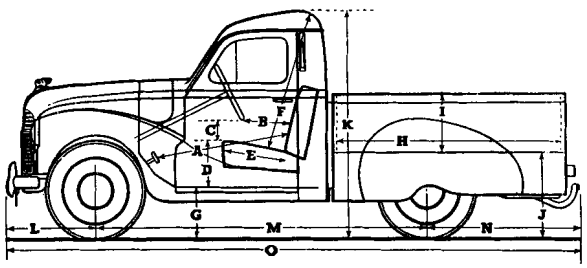
A40 SPORTS DIMENSIONS		English	Metric
		ft. ins.	metres
Overall Length	O	13 3½	4.04
Overall Width	...	5 1	1.55
Scuttle Width (at knee height) ...	...	3 11½	1.20
Body Width over Front Seat	...	4 1½	1.25
Rear Seat Maximum Width	...	3 3	0.99
Wheelbase	...	7 8½	2.35
Track (front)	...	4 0½	1.23
Track (rear)	...	4 1½	1.26
Ground clearance	...	7½	0.19
Turning circle	...	38 0	11.58
Luggage Compartment—Height of Opening		1 7½	0.50
Luggage Compartment—Width of Opening		3 10	1.17
Luggage Compartment—Depth of Platform		2 9	0.84
Luggage Compartment—Capacity		13 cu. ft.	0.37 cu. m.
Approximate Weight, less spare wheel, tools and fuel	...	18 cwt. 44 lbs.	934 kg.





A40 VAN DIMENSIONS		English	Metric
		ft. ins.	metres
Pedal to Seat Squab	A	3 3	0.99
Steering Wheel to Seat Squab ...	B	1 3	0.38
Steering Wheel to Seat	C	6½	0.16
Height of Seat above Floor ...	D	1 1½	0.34
Seat Cushion Depth	E	1 5	0.43
Height over Seat	F	3 3	0.99
Cab Floor to Ground (unladen) ...	G	1 4	0.40
Length of Body Floor	H	6 0	1.83
Body Interior Height	I	3 7½	1.10
Height of Rear Door Opening ...	J	3 1	0.94
Overall Height (unladen)	K	6 1½	1.86
Body Floor to Ground (unladen) ...	L	2 5	0.74
Centre of Front Wheel to Bumper...	M	2 0½	0.62
Wheelbase	N	7 8½	2.35
Centre of Rear Wheel to Bumper ...	O	3 6½	1.08
Overall Length	P	13 3½	4.05
Overall Width		5 4½	1.64
Body Interior Width		5 2½	1.58
Width between Wheelarches		3 3½	1.00
Width of Rear Door Opening		4 1½	1.25
Track, front		4 1½	1.25
Track, rear		4 2½	1.28
Turning Circle		38 0	11.58
Ground Clearance		7½	0.19
Body Capacity		116 cu. ft.	3.29 cu. m.
Approx. Weight (less spare wheel, tools and fuel, plus oil and water)		18 cwt. 23 lbs.	924 kg.

A40 COUNTRYMAN DIMENSIONS		English	Metric
		ft. ins.	metres
Steering Wheel to Seat	A	7	0.18
Pedal to Seat Squab	B	3 4	1.01
Steering Wheel to Seat Squab ...	C	1 4½	0.42
Height of Front Seat above Floor ...	D	1 0½	0.31
Depth of Front Seat...	E	1 7	0.48
Height over Front Seat	F	3 3	0.99
Height of Rear Seat above Floor ...	G	1 4½	0.42
Back of Rear Seat (folded) to Rear Doors	H	5 1½	1.55
Height of Rear Door Opening ...	I	3 1	0.94
Height over Rear Seat	J	3 2	0.96
Overall Height	K	6 1½	1.86
Body Floor to Ground	L	2 5	0.74
Overall Length	M	13 3½	4.05
Cab Floor to Ground	N	1 2	0.35
Back of Rear Seat Squab to Rear Doors ...		2 10	0.86
Overall Width		5 4½	1.64
Max. Interior Width		5 0	1.52
Width between Wheelarches		3 3½	1.00
Width of Door Opening		4 1½	1.25
Wheelbase		7 8½	2.35
Track, front		4 1½	1.25
Track, rear		4 2½	1.28
Turning Circle		38 0	11.58
Ground Clearance		7½	0.19
Approx. Weight (less spare wheel, tools and fuel, plus oil and water)		20 cwt. 19 lbs.	1024 kg.



A40 PICK-UP DIMENSIONS		English	Metric
		ft. ins.	metres
Pedal to Seat Squab	A	3 0½	0.93
Steering Wheel to Seat Squab ...	B	1 1	0.33
Steering Wheel to Seat	C	6½	0.16
Height of Seat above Floor	D	1 1	0.33
Seat Cushion Depth	E	1 5	0.43
Height over Seat	F	3 2½	0.97
Cab Floor to Ground	G	1 4	0.41
Length of Body Floor	H	5 3½	1.61
Height over Body Sides	I	1 5	0.43
Body Floor to Ground	J	2 4½	0.72
Overall Height	K	5 6½	1.70
Centre of Front Wheel to Bumper ...	L	2 0½	0.61
Wheelbase	M	7 8½	2.35

A40 PICK-UP DIMENSIONS		English	Metric
		ft. ins.	metres
Centre of Rear Wheel to Bumper ...	N	3 7	1.09
Overall Length	O	13 4	4.07
Overall Length (tailboard down)		14 4	4.37
Overall Width		5 1½	1.56
Track, front		4 1½	1.25
Track, rear		4 2½	1.28
Interior Body Width		4 3	1.29
Width between Wheelarches		3 3½	1.00
Ground Clearance		7½	0.19
Turning Circle		38 0	11.58
Approx. Weight (less spare wheel, tools and fuel, plus oil and water)		18 cwt. 44 lbs.	934 kg.

REGULAR ATTENTIONS

The following is a convenient list of regular attentions which the car should receive to keep it in good mechanical condition. These instructions should be closely followed, whether the attentions are performed by the owner or the local garage.

The attentions under the Daily and Weekly headings are based on the assumption that the maximum mileage per week does not exceed 500, but see " After Sales Service " as detailed in the handbook for special attention during the first 1,000 miles.

Under more arduous conditions, such as very dusty or very muddy roads, long distances at high speeds or with heavy loads, it will be advisable to attend to chassis lubrication more frequently.

DAILY

Engine

Check the level of oil in the sump and top up if necessary to the full mark on the dipstick, situated on the right-hand side of the engine. When adding oil through the oil filler, at the rear end of the valve rocker cover, pour slowly to avoid the oil overflowing. If the engine has been running, allow a few minutes for the oil to settle before checking the level.

Radiator

Check the level of water in the radiator and top up if necessary. Fill to just below the top of the filler plug thread, when the engine is cold.

Fuel Tank

Check the quantity of fuel in the tank and add upper cylinder lubricant if desired.

EVERY 500 MILES (800 Km.)

Shackle Pins

These are on the rear ends of the rear road springs and should be given a charge of oil once a week. There are two nipples, one for each top shackle.

Front Suspension

Apply the oil gun to each of the lower wishbone arm outer bearing nipples.

Swivel Axles

Apply the oil gun on the two nipples on each swivel axle. This is best done with the axle jacked up since the oil is then able to penetrate to the thrust side of the bearing.

Steering Connections

Apply the oil gun to the steering centre cross tube nipples (2) and the steering side cross tube nipples (4). Top up the steering idler with oil via the filler plug in the top cap.

Wheels and Tyres

Check the tightness of the wheel nuts also check the tyre pressures, using a tyre gauge, and inflate if necessary. See that all valves are fitted with valve caps and inspect the tyres for injury. Remove any flints or nails from the treads and ensure that there is no oil or grease on the tyre, since these substances prove injurious to rubber.

For recommended pressures, see Section N.

A tyre that loses more than three to four pounds per square inch in a week should be suspected of a puncture, but first make sure that the valve is not leaking

FIRST 500 MILES (800 Km.)

Engine

On new and reconditioned engines the sump should be drained and refilled with new oil after the first 500 miles. At the same time as these changes are made, the cylinder head nuts should be tested and tightened if it is found necessary.

With the new engine, during the running in and settling down period (approximately 1,000 miles) a slight falling off of power sometimes develops; it is then advisable to lightly grind-in the valves and re-set the valve clearances. On such occasions there is no need to decarbonise the tops of the pistons.

Gearbox and Rear Axle

After 500 miles on new vehicles, drain and refill the gearbox and rear axle.

Always drain the oil after a run, since it will flow more easily when warm.

EVERY 2,000 MILES (3,200 Km.)

Engine

Drain the sump and refill with new oil. Capacity is 7 pints, inclusive of filter.

Gearbox

Check the level and top up if necessary. For access lift the front carpet and remove the small plate on the side of the gearbox covering. The filler plug is then accessible. Clean any dirt or grit away from around the plug. Remove the plug and fill up to the bottom of the threads. This gives the correct level.

Shock Absorbers

Check all shock absorbers for leaks and see that the rubber bushes are undamaged.

Clutch Pedal

With the oil gun, lubricate the nipple at the pivot of the lever.

On left-hand drive models the nipple is situated on the underside of the larger diameter tube of the telescopic fitting, see Section E, page 3.

Brakes

Examine the brakes and adjust if necessary. Apply the oil gun to the balance lever on the rear axle case, the handbrake pivot and the pedal pivot nipple.

Rear Axle

Check the level and replenish if necessary. The correct oil should be used and injected into the axle casing from underneath, using the adaptor on the oil gun.

First remove the plug, which is on the right lower front side of the axle carrier, then place the end of the adaptor into the oil hole and inject the oil.

The plug also serves as an oil level indicator. Therefore, do not replace the plug at once, but give time for the superfluous oil to run out if too much has been injected. This is most important, because, if the rear axle is overfilled, the lubricant may leak through the brakes and render them ineffective. Wipe away the excess oil from the casing.

Steering Column

Lubricate the felt washer at the top of the steering column by adding a few drops of light machine oil through the hole in the steering wheel hub close to the steering column.

Battery

Ascertain the state of charge of the 12-volt battery by taking hydrometer readings. The specific gravity readings should be:—

Fully charged	1.280—1.300
Half charged	approx. 1.201
Discharged	below 1.150

These figures are for an assumed electrolyte temperature of 60 deg. F.

Check that the electrolyte in the cells is just level with the tops of the separators. If necessary add a few drops of distilled water. Never use tap water as it contains impurities detrimental to the battery.

Never leave the battery in a discharged condition. If the car is to be out of use for any length of time, have the battery removed and charged about once a fortnight.

Brake Supply Tank

Inspect and refill to the correct level. This tank is situated on the radiator mounting frame of the Saloon and secured to the scuttle of the Sports and Commercials. Use only the recommended fluid.

EVERY 3,000 MILES (4,800 Km.)

Sparking Plugs

Remove the plugs and clean off all carbon deposit from the electrodes, insulations and plug threads with a stiff brush dipped in paraffin. Alternatively the plugs may be taken to a local Austin dealer for cleaning in a special machine.

Clean and dress the plug points and reset to the correct gap of .018 in. for the Saloon and .025 in. for the Sports.

Before replacing the plugs check that the copper washers are in a sound condition. Never over-tighten a plug but ensure that a good joint is made between the plug body, the copper washer and the cylinder head.

Saloon and Commerials—use Champion N.8B Long Reach 14 mm. plugs;

Sports—use Champion N.A.8 Long Reach 14 mm. plugs.

Distributor Cam and Drive Shaft Bearings

Lubricate the distributor camshaft bearings by withdrawing the rotor arm from the top of the distributor spindle and carefully adding a few drops of thin machine oil round the screw exposed to view. Take care to refit the arm correctly by pushing it on to the shaft and turning until the key is properly located.

Distributor Cam

Apply a trace of engine oil to the distributor cam. Do not let any oil reach the contact breaker points.

Distributor Automatic Advance

Remove the distributor cap and add a few drops of engine oil through the hole in the contact breaker base through which the cam passes.

EVERY 5,000 MILES (8,000 Km.)

Air Cleaner

Saloon: Every 5,000 miles the air cleaner should be removed, cleaned and "wetted" with fresh oil. To do this, slacken the clamping bolt and release the breather pipe from the valve rocker cover, lift off the air cleaner and then thoroughly rinse the louvred end in a shallow dish of petrol.

After drying, the metal gauze mesh should be re-oiled with clean engine oil, allowing the surplus oil to drain off before refitting the cleaner to the carburetter.

An oil bath type filter is fitted to cars for the export market. The oil therein should be checked and the gauze cleaned regularly.

Fuel System

Check the flow of the fuel at the carburetter inlet union and, if necessary, clean the petrol filters in the pump and in the carburetter inlet union, also clean the jets.

Radiator

Flush out the cooling system by opening the drain taps. There is one at the bottom of the radiator and another on the right side at the rear of the crankcase. Open the heater water cock. Water should then be allowed to run through until it comes out clear.

When refilling, and particularly if cold water is used, a few minutes must be allowed for air to escape past the thermostat valve before final topping up is effected.

In winter, when flushing the radiator, take care to preserve the cooling mixture if anti-freeze has been added.

Speedometer Drive

Disconnect the cable from the speedometer end and pull the inner member out of the casing. Lubricate by dipping it in fairly thick oil.

To reassemble, thread the oily shafting into the casing, giving a twisting movement while threading since this will help to engage it easily at the gearbox end. When the engagement is felt the shafting can be pushed right home so that the top square end stands out from the casing approximately $\frac{3}{8}$ inch.

Gearbox

Drain when the oil is warm, after a run, and refill to the level of the filler plug with new oil. Capacity, 3 pints.

Rear Axle

It is wise to drain the rear axle after a run, as the oil will flow more freely when warm, then refill to the level of the filler plug with new oil. Capacity, $2\frac{1}{4}$ pints.

Front Road Wheel Hubs

Unscrew the hub cap and recharge with grease. It is important that the hubs are not given too much grease as it may penetrate to the brake shoes.

Rear Road Wheel Hubs

These are packed with grease upon assembly and do not require greasing attention.

Fan Belt

The fan belt must be sufficiently tight to prevent slip at the dynamo and water pump, yet there should be sufficient slackness to move the centre of the belt sideways about one inch.

To make any necessary adjustment, slacken the bolts and raise or lower the dynamo until the desired tension of the belt is obtained. Then securely lock the dynamo in position again.

Steering Box

The steering box should be topped up with oil, using the special adaptor on the oil gun. Take out the hexagon plug on the side of the steering box to inject the oil. Make certain that grit does not enter the casing during the operation and wipe away any excess oil afterwards.

General Check

Examine and, if necessary, tighten all bolts and nuts of such components as road spring clips, shock absorber retaining bolts and body mounting bolts.

Examine other parts, such as steering connections, brake rods, etc., neglect of any may be followed by an expensive repair and inability to use the car for a lengthy period.

EVERY 10,000 MILES (16,000 Km.)

Universal Joints

Lubricate the universal joints. The front joint is best lubricated from above, through the hole in the propeller shaft tunnel, at a point between the two front seats.

The rear joint must be lubricated from below. Move the car to bring the nipples to the required positions.

Also test the flange bolts and tighten if these have worked loose ; the nuts are secured with tab washers.

Clutch Operating Shaft

Lubricate the two nipples sparingly.

Sparking Plugs

Renew the sparking plugs, Champion N.8B. Long Reach for the Saloon and Champion N.A.8 Long Reach for the Sports.

Dynamo Bearings

Unscrew the wick type lubricator cover and if the wick is dry refill the cup with high melting point grease.

Note.—From engine No. 857519 (Saloon, Coupé and Commercials) and engine No. 817406 (Sports) the wick type lubricator has been dispensed with. Instead, a hole has been drilled in the end cap through which a few drops of oil (S.A.E. 20) should be forced every 6,000 miles.

"SPORTS" REGULAR ATTENTIONS

The following list of attentions is of those which cover components or accessories not common to the Saloon. All other attentions should be carried out as previously recommended.

EVERY 2,000 MILES (3,200 Km.)

Air Cleaners

The air cleaners should be dismantled and the elements thoroughly cleaned with the aid of compressed air, see page C/12. If an element has become contaminated with oil or grease it should be thoroughly washed in petrol and allowed to dry before being replaced.

Carburetters

Remove the knurled cap at the top of each carburetter and add a few drops of oil to the suction piston chambers.

EVERY 5,000 MILES (8,000 Km.)

Carburetters

The flow of fuel at the carburetter inlet unions to the float chambers should be checked, and if necessary the filters in those unions should be cleaned.

Disconnect the float chamber fuel supply pipes (when the filters may be taken out and cleaned), slacken the float chamber cap nuts and unscrew their securing bolts. The chambers themselves can then be removed for cleaning.

EVERY 10,000 MILES (16,000 Km.)

Carburetters

Clean out the suction assembly by removing the two securing screws and lifting off the body in the same plane to avoid damage to the needle.

Lift out the hydraulic damper and wash the assembly in petrol. Dry thoroughly, refit and replenish the damper with oil. When fully re-assembled, lift the piston to its fullest extent thus expelling the surplus oil through the top cap and at the same time lubricating the rod.

Air Cleaners

Remove the top caps and renew the elements.

SERVICE ATTENTIONS

The following additional inspections and adjustments should be carried out periodically by an Austin Dealer at the mileages mentioned. These attentions are not usually carried out by normal owner drivers and the tools supplied in the Tool Kit are not sufficient for the work entailed.

EVERY 5,000 MILES (8,000 Km.)

Decarbonising, Valve Grinding and Tappet Adjustment

This attention may not be needed so frequently on cars used for long journeys. As a general rule, a falling off in engine power with pinking indicates when decarbonising is due.

This operation entails such preliminary dismantling of components as the carburetter, manifolds, cylinder head and push rods. The correct valve clearance, measured between the rocker arm and the valve stem, is .015in., with the engine hot or cold.

Shock Absorbers

All the shock absorbers fitted to the A40 models, with the exception of the A40 Sports fronts, are of Armstrong manufacture. Check the fluid levels and top up if necessary. The correct level is just below the filler plug threads. Carefully clear away all road dirt and grit from the vicinity of the filler plug before removal. Use only Armstrong Super (Thin) Shock Absorber Oil.

Girling shock absorbers are fitted to the A40 Sports front suspension. They must be removed from the chassis before inspecting the fluid levels or topping up with Girling Piston Type Thin Fluid.

EVERY 6,000 MILES (9,600 Km.)

External Oil Filter

Take off the old filter and replace it with a new unit. Use only "A.C. Sphinx" type AR1C or Purolator Micronic type MF2001.

EVERY 10,000 MILES (16,000 Km.)

Contact Breaker Points

Clean the contact breaker points. Cleaning of the contacts is made easier if the contact breaker lever, which carries the moving contact, is removed. To do this, slacken the nuts on the terminal post and lift off the spring, which is slotted to facilitate removal. Before replacing, smear the pivot on which the contact breaker works, with clean oil.

Check the contact breaker setting, re-set if necessary. The correct gap is .014—.016in.

Starter Commutators

Clean, also check the freedom of the brushes within the holders.

Track Adjustment

Check the front wheel alignment: $\frac{1}{16}$—$\frac{1}{8}$in. toe-in taken along a horizontal line at centre height using the wheel rims as data points.

Steering Box

Check for wear. This may be felt when the front wheels can be moved without creating any movement at the steering wheel.

Clutch Pedal Clearance

Check and adjust if necessary. The pedal should be depressed approximately $\frac{3}{4}$in. before the clutch springs are felt to be under compression.

Oil Sump

Remove and clean the sump, also the oil pump strainer gauze.

Front and Rear Hub Bearings

Check for any signs of wear. Details for this operation are given in Sections H and K.

Ignition Timing

Check the setting and adjust if necessary.